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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,093	03/19/2004	Richard D. Morris	5243	7704
22896	7590	10/04/2005	EXAMINER	
MILA KASAN, PATENT DEPT. APPLIED BIOSYSTEMS 850 LINCOLN CENTRE DRIVE FOSTER CITY, CA 94404			TWEEL JR, JOHN ALEXANDER	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/805,093	Applicant(s) MORRIS ET AL.	
	Examiner John A. Tweel, Jr.	Art Unit 2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/19/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 610. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:
- Paragraph 31, Line 5: The word "are" is not needed before "can".
 - Paragraph 50, Line 3: The word "the" before "tubes" is not needed.
 - Paragraph 62, Line 12: The word "reagents" should be singular.
- Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 12-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Patek et al** [U.S. 6,541,211].

For claim 1, the apparatus for associating information with a biological reagent taught by **Patek** includes the following claimed subject matter, as noted, 1) the claimed carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier.

The reference does not depict an RFID reader; however, readers have been used with RFID tags since their inception. The use of one in the reference is considered an obvious variation on the prior art and not a patentable innovation.

For claims 2-7, the type of container the RFID tag is attached to is not considered a patentable innovation as RFID tags have been embedded and adhered to many different types of containers, such as boxes, bags, envelopes, glasses, and even articles of clothing. The specific carriers mentioned in these claims are but a few materials RFID tags have been associated with.

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For claim 12, the apparatus for associating information with a biological reagent taught by **Patek** includes the following claimed subject matter, as noted, 1) the claimed carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier.

The reference does not depict an RFID reader; however, readers have been used with RFID tags since their inception. The use of one in the reference is considered an obvious variation on the prior art and not a patentable innovation.

For claims 13 and 14, the type of information contained on the RFID chip is not considered a patentable innovation as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information and location. Information such as nucleic acid sequence and past experiments are easily programmed into RFID technology.

For claims 15, 16, 18, and 19, the claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claims 12-14 above.

5. Claims 8, 9, and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Patek et al** in view of **Brady et al** [U.S. 6,201,474].

For claim 8, the reference taught by Patek includes the claimed subject matter as discussed in the rejection of claim 1 above. However, there is no mention of embedding the RFID antenna in an interior portion of the carrier.

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Embedding RFID tags within carriers is not new in the prior art. The tape storage media taught by Brady includes a videocassette having an RFID tag embedded within as seen in Figures 3 and 4. The obvious advantage of this system is that it provides easier and more readily available information and tracking purposes.

As the biological reagents require careful tracking and information corresponding thereto needs to be carefully recorded, it would have been obvious to one of ordinary skill in the art at the time the invention was made to embed the RFID antenna in the biological carrier of Patek for the purpose of insuring reliable tracking and information purposes.

For claim 9, figures 1 and 2 of Brady depict an RFID tag adhered to at least part of an exterior portion of the tape.

For claim 20, the apparatus for associating information taught by Patek includes the following claimed subject matter, 1) the claimed microarray is met by the reagent carrier (No. 32) seen in figure 14A, the specific type of carrier not being a patentable innovation as RFID tags have been embedded and adhered to many different types of containers, and 2) the claimed RFID tag is met by the RFID tag (No. 34). However, there is no mention of a substrate.

Substrates have been used to mount RFID electronics and circuitry for some time. The storage media taught by Brady teaches the use of a substrate (No. 140) onto which RFID antennae have been etched to communicate with RF readers and writers. This reference is plain evidence that substrates have been used with RFID tags for some time. It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to include a substrate with the RFID tag of Patek, as this is a well-known method of attaching RFID technology to carriers.

For claims 21 and 22, the type of information contained on the RFID chip is not considered a patentable innovation as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information and location. Information such as nucleic acid sequence and spot pattern are easily programmed into RFID technology.

For claims 23-27, nearly every substrate used to mount RFID tags has first and second surfaces facing opposite directions. Similarly, RFID antennae have been etched and embedded in and on substrates for some time. The location of the antenna on the substrate is not considered a patentable innovation.

6. Claims 10, 11, 17, 28-41, 44-59, and 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Patek et al** in view of **McNeil** [U.S. 6,429,016].

For claim 10, the apparatus taught by Patek includes the claimed subject matter as discussed in the rejection of claim 1 above. Although readers have been used in RFID technology since their inception, there is no mention of an instrument having an RFID reader and at least one output interface that provides output information.

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The system and method for sample positioning taught by McNeil includes a reading device (No. 73) designed to interface with whatever identification means is used to identify the carrier, whether it be an LED and optical sensor or RFID tag having an associated reader. A display system is mentioned in the description to assist in the identification and status of the system. This reference is plain evidence that RFID readers and output systems have been used for some time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a reader and output system as this is a well-known and common method of RFID tracking and information handling.

For claim 11, RFID technology does not require line-of-sight to the RFID tag, thereby preventing optical scanning by the reader.

For claim 17, the apparatus of Patek includes the claimed subject matter as discussed in the rejection of claim 15 above. However, there is no mention of a biological instrument comprising a reader for the RFID tag.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above.

For claim 28, the apparatus for associating information with a biological reagent taught by Patek includes the following claimed subject matter, as noted, 1) the claimed carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier. Although readers have been used in RFID technology since their inception, there is no mention of an instrument having an RFID reader and at least one output interface that provides output information.

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The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above. RFID technology does not require line-of-sight to the RFID tag, thereby preventing optical scanning by the reader.

For claim 29, the apparatus for associating information with a biological reagent taught by Patek includes the following claimed subject matter, as noted, 1) the claimed carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier. Although readers have been used in RFID technology since their inception, there is no mention of an instrument having an RFID reader and at least one output interface that provides output information.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above.

For claim 30, the biological instrument controller found in McNeil comprises instrument hardware.

For claim 31, the McNeil reference is designed to be run and associated with a standard personal computer.

For claims 32-37, the type of information contained on the RFID chip is not considered a patentable innovation as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information and location. Information such as instrument operation is easily programmed into RFID technology.

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For claim 38, the workstations used in the McNeil reference perform a variety of functions such as optical measurements, washing, incubation, and filtration.

For claim 39, the method for associating information regarding biological reagents with carriers taught by Patek includes the following claimed subject matter, as noted, 1) the claimed providing a carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier. Although readers have been used in RFID technology since their inception, there is no mention of receiving identification information associated with the reagent.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above.

For claims 40 and 41, the McNeil reference tracks the location of biological reagents during manufacturing processes.

For claim 44, inventory is a common and well-known RFID function. The use of RFID for inventory is not considered a patentable innovation.

For claim 45, the method for associating information regarding biological reagents with carriers taught by Patek includes the following claimed subject matter, as noted, 1) the claimed providing a carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier. Although readers have been used in RFID technology since their inception, there is no mention of receiving supplemental information associated with the reagent.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above.

For claims 46-48, the type of information contained on the RFID chip is not considered a patentable innovation as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information and location. Information such as composition information and nucleic acid sequence information is easily programmed into RFID technology.

For claim 49, the McNeil reference is used in an automation setting having mobile robots.

For claims 50-58, the type of information contained on the RFID chip is not considered a patentable innovation as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information and location. Information such as lot number, country of origin, work order, customer identification, and customs service information is easily programmed into RFID technology.

For claim 59, the method for associating information regarding biological reagents with carriers taught by Patek includes the following claimed subject matter, as noted, 1) the claimed providing a carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier. Although readers have been used in RFID technology since their inception, there is no mention of receiving rights information associated with the reagent.

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The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above.

For claim 66, the method for associating information regarding biological reagents with carriers taught by Patek includes the following claimed subject matter, as noted, 1) the claimed providing a carrier is met by the frame (No. 32) for carrying a plurality of reagent containers, and 2) the claimed RFID tag is met by the RFID chip (No. 34) coupled to the carrier. Although readers have been used in RFID technology since their inception, there is no mention of receiving instrument operation information associated with the reagent.

The claim is interpreted and rejected for the same reasons and rationale as is mentioned in the rejection of claim 10 above.

For claims 67-69, the type of information contained on the RFID chip is not considered a patentable innovation as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information and location. Information such as software control, sequence of operations, and changing states information is easily programmed into RFID technology.

7. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Patek et al** in view of **McNeil** as applied to claim 41 above, and further in view of **McDonald** [U.S. 6,211,781].

For claim 42, the method taught by the combination of references above includes the claimed subject matter as discussed in the rejection of claim 41

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above. However, there is no mention of receiving real-time location using triangulation parameters.

The method for tracking and locating a moveable article taught by McDonald uses triangulation (Col. 9, Ln 61) to locate articles using RF signals. This reference is plain evidence that triangulation has been used to locate articles having RFID tags. It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the RFID tags using triangulation, as this is a well-known and common method of location.

8. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Patek** in view of **McNeil** as applied to claim 41 above, and further in view of **UmiKer** [U.S. 6,483,434].

For claim 43, the method taught by the combination of references above includes the claimed subject matter as discussed in the rejection of claim 41 above. However, there is no mention of receiving real-time location using GPS coordinates.

The method for tracking a container taught by UmiKer uses GPS (Col. 2, Ln. 2) to locate articles having RF signals. This reference is plain evidence that GPS has been used to locate articles having RFID tags. It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the RFID tags using GPS, as this is a well-known and common method of location.

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9. Claims 60-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Patek et al** in view of **McNeil** as applied to claim 59 above, and further in view of **Valiulis** [U.S. 6,317,028].

For claim 60, the combination of references above includes the claimed subject matter as discussed in the rejection of claim 59 above. However, there is no mention of authorizing use of the biological reagent.

The Valiulis reference teaches the use of RFID as authentication using password codes and communication circuitry capable of transmitting the password codes. This reference is plain evidence that RFID technology has been used for authentication in order to reduce theft and add security to the system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the RFID tags for authentication for the purpose of increasing the security of the system.

For claim 61, the system of Valiulis is used for authentication purposes.

For claim 62, the system of McNeil involves different activities on a plurality of instruments.

For claim 63, RFID identifiers are commonly digital signatures. The use of one is not a patentable innovation.

For claims 64 and 65, the Valiulis reference also provides for recall information and other safety issues.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Alicot et al [U.S. 5,859,587] teaches an EAS tag and data communication transponder.

Grimes [U.S. 6,359,444] has an antenna in communication with a resonant circuit to sense an analyte.

Mitchell et al [U.S. 6,520,544] uses RFID labels on reusable containers.

Bedingham et al [U.S. 6,889,468] processes sample materials using RFID technology.

Veitch et al [U.S. 2004/0100415] provides a sample container with RFID for identification purposes.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Tweel, Jr. whose telephone number is 571 272 2969. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass can be reached on 571 272 2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAT
10/1/05

A handwritten signature in black ink, appearing to read 'John Tweel', with a stylized, cursive script.

**JOHN TWEEL
PRIMARY EXAMINER**